

CUMULATIVE INDEXES

CONTRIBUTING AUTHORS, VOLUMES 49-53

- Adelberg EA, 52:1-40
Aerne BL, 51:125-49
Ahmad SI, 52:591-625
Altendorf K, 50:791-824
Andrews JH, 52:105-26
Andrews NW, 49:175-200
Appleman JA, 50:645-77
Archelas A, 51:491-525
Armstrong G, 51:629-59
Arvin AM, 50:59-100

Bartlett MS, 50:645-77
Battista JR, 51:203-24
Bauer CE, 53:495-523
Baumann L, 49:55-94
Baumann P, 49:55-94
Belay ED, 53:283-314
Ben-Jacob E, 52:779-806
Bennett JW, 53:411-46
Bentley R, 53:411-46
Bergstrom JD, 49:607-39
Bierbaum G, 52:41-79
Bills GF, 49:607-39
Bird TH, 53:495-523
Blair DF, 49:489-522
Bobik TA, 50:137-81
Boemare N, 51:47-72
Borst P, 49:427-60;
 52:745-78
Branton PE, 53:577-628
Breeuwer JAJ, 53:71-102
Brock TD, 49:1-28
Brown BA, 52:453-90
Buchanan RJ Jr, 52:423-52
Burleigh BA, 49:175-200
Byrne K, 49:607-39

Caldwell DE, 49:711-45
Casey WM, 49:95-116

Chandler M, 53:245-81
Chiang SL, 53:129-54
Churchward GG, 49:367-97
Clark MA, 49:55-94
Cohen I, 52:779-806
Condemine G, 50:213-57
Costerton JW, 49:711-45
Cozzzone AJ, 52:127-64

Dean DR, 49:335-66
Deckers-Hebestreit G,
 50:791-824
de Jong E, 51:375-414
de Lorenzo V, 51:593-628
DeLuca NA, 49:675-710
Dijkstra BW, 53:315-51
DiMaio D, 52:397-421
Dobbelaere D, 53:1-42
Domingo E, 51:151-78
Dowds B, 51:47-72
Draths KM, 49:557-79
Dubnau D, 53:217-44
Dufresne C, 49:607-39
Duncan K, 49:641-73
Dunny GM, 51:527-64
Dybwig K, 50:25-57

Eisenstark A, 52:591-625
Elsen S, 53:495-523
Engelberg-Kulka H, 53:43-70
Englund PT, 49:117-43
Estes MK, 49:461-87

Fairlamb AH, 52:745-78
Fauci AS, 50:825-54
Ferry JG, 49:305-33
Field JA, 51:375-414
Fink DJ, 49:675-710
Fisher K, 49:335-66

Forst S, 51:47-72
Foster JW, 49:145-74
Francis SE, 51:97-123
Frost JW, 49:557-79
Fujii I, 49:201-38
Fuqua C, 50:727-51
Furstoss R, 51:491-525

Gaal T, 50:645-77
Ge Z, 53:353-87
Gershon AA, 50:59-100
Gillin FD, 50:679-705
Glaser G, 53:43-70
Glorioso JC, 49:675-710
Goldberg DE, 51:97-123
Golden SS, 53:389-409
Goldhar J, 49:239-76
Gosink JJ, 53:189-215
Gourse RL, 50:645-77
Greenberg EP, 50:727-51
Griffin DE, 51:565-92
Griffith DE, 52:453-90
Guarente L, 52:533-60
Gull K, 53:629-55
Gutnick DL, 52:779-806

Hardwick JM, 51:565-92
Haren L, 53:245-81
Harwood CS, 50:553-90
Hernandez-Pando R,
 50:259-84
Heussler V, 53:1-42
Holden DW, 53:129-54
Holland JJ, 51:151-78
Howard RJ, 50:491-512
Hughes KT, 52:231-86
Hugouvieux-Cotte-Pattat N,
 50:213-57
Hurst GDD, 53:71-102

- Hutchinson CR, 49:201-38
 Jaeger K-E, 53:315-51
 Jannasch HW, 51:1-45
 Jerris RC, 50:707-25
 Johnson CH, 53:389-409
 Johnson EA, 53:551-75
 Johnson MS, 53:103-28
 Johnston LH, 51:125-49
 Joiner KA, 51:415-62
 Kasamatsu H, 52:627-86
 Keisari Y, 49:239-76
 Kirk SH, 52:591-625
 Klein O, 52:397-421
 Klier CM, 50:513-52
 Koch AL, 50:317-48
 Kolenbrander PE,
 50:513-52
 Korber DR, 49:711-45
 Lai C-C, 52:397-421
 Lai C-Y, 49:55-94
 Lamm ME, 51:311-40
 Lang-Unnasch N,
 52:561-90
 Lappin-Scott HM,
 49:711-45
 Lawrence JG, 50:137-81
 Lee MD, 52:423-52
 Lee MGS, 51:463-89
 Leonard BAB,
 51:527-64
 Leschine SB, 49:399-426
 Lewandowski Z,
 49:711-45
 Lin R, 49:747-75
 Madden K, 52:687-744
 Malim MH, 52:491-532
 Mancinelli RL, 49:581-605
 Marasco W, 51:257-83
 Marcellus RC, 53:577-628
 Marqués S, 51:341-73
 Marzluft GA, 51:73-96
 Mathee K, 52:231-86
 McCaffery JM, 50:679-705
 McGarvey GJ, 51:285-310
 Meijer WG, 52:191-230
 Meints RH, 53:447-94
 Mekalanos JJ, 53:129-54
 Melnick JL, 49:461-87;
 50:1-24
 Metcalf TG, 49:461-87
 Miller JH, 50:625-43
 Miller KJ, 50:101-36
 Mills K, 52:533-60
 Missiakas D, 51:179-202
 Mor A, 49:277-304
 Moran NA, 49:55-94
 Morgan BA, 51:125-49
 Murphy AD, 52:561-90
 Nakanishi A, 52:627-86
 Nakano MM, 52:165-90
 Nallin-Omstead M,
 49:607-39
 Nasser W, 50:213-57
 Newman EB, 49:747-75
 Nicolas P, 49:277-304
 Odom JM, 52:423-52
 Ofek I, 49:239-76
 Ouellette M, 49:427-60
 Pantaleo G, 50:825-54
 Parales RE, 50:553-90
 Parks LW, 49:95-116
 Patel RN, 52:361-95
 Pérez-Martín J,
 51:593-628
 Persing DH, 50:349-73
 Peters JW, 49:335-66
 Phung LT, 50:753-89
 Pollard VW, 52:491-532
 Raina S, 51:179-202
 Ramig RF, 51:225-55
 Ramos JL, 51:341-73
 Reetz MT, 53:315-51
 Regnery RL, 50:707-25
 Reineke W, 52:287-331
 Reiner DS, 50:679-705
 Reverchon S, 50:213-57
 Roberts IS, 50:285-315
 Roessner CA, 50:467-90
 Rondon I, 51:257-83
 Rood JI, 52:333-60
 Rook GAW, 50:259-84
 Ross W, 50:645-705
 Roth JR, 50:137-81
 Rouhbakhsh D, 49:55-94
 Roulston A, 53:577-628
 Ruby EG, 50:591-624
 Sahl H-G, 52:41-79
 Scott AI, 50:467-90
 Scott JR, 49:367-97
 Setlow P, 49:29-54
 Shapiro JA, 52:81-104
 Shapiro TA, 49:117-43
 Sharon N, 49:239-76
 Shimizu Y, 50:431-65
 Shimkets LJ, 53:525-49
 Shively JM, 52:191-230
 Silver S, 50:753-89
 Sinai AP, 51:415-62
 Sinclair D, 52:533-60
 Smith AE, 49:807-38
 Snyder M, 52:687-744
 Spain JC, 49:523-55
 Spector MP, 49:145-74
 Stackebrandt E, 51:47-72
 Staley JT, 53:189-215
 Stouthamer R, 53:71-102
 Sullivan DJ, 51:97-123
 Takayama S, 51:285-310
 Taylor BL, 53:103-28
 Taylor DE, 53:353-87
 Tibayrenc M, 50:401-29
 Timmis KN, 51:341-73
 Ton-Hoang B, 53:245-81
 Toone WM, 51:125-49
 Valent B, 50:491-512
 Van der Ploeg L, 51:463-89
 Van Etten JL, 53:447-94
 van Keulen G, 52:191-230
 van Pee K-H, 50:375-99
 Voelker LL, 50:25-57

- Wallace RJ Jr, 52:453-90
Warren RAJ, 50:183-212
Weinrauch Y, 53:155-87
Whelen AC, 50:349-73
Whittaker CJ, 50:513-52
- Winans SC, 50:727-51
Wong C, 51:285-310
Wood JM, 50:101-36
Yayanos AA, 49:777-805
- Young DB, 49:641-73
Zhulin IB, 53:103-28
Zuber P, 52:165-90
Zychlinski A, 53:155-87



CHAPTER TITLES, VOLUMES 49-53

Prefatory Chapters

The Road to Yellowstone—and Beyond	TD Brock	49:1-28
My Role in the Discovery and		
Classification of the Enteroviruses	JL Melnick	50:1-24
Small is Powerful: Recollections of a		
Microbiologist and Oceanographer	HW Jannasch	51:1-45
The Right Place at the Right Time	EA Adelberg	52:1-40

Animal Pathogens and Diseases

Peptides as Weapons Against		
Microorganisms in the Chemical		
Defense System of Vertebrates	P Nicolas, A Mor	49:277-304
New Mechanisms of Drug Resistance in		
Parasitic Protozoa	P Borst, M Ouellette	49:427-60
Prospects for New Interventions in		
the Treatment and Prevention of		
Mycobacterial Disease	DB Young, K Duncan	49:641-73
Transformation of Leukocytes by		
<i>Theileria parva</i> and <i>T. annulata</i>	D Dobbelaere, V Heussler	53:1-42
Addiction Modules and Programmed Cell		
Death and Antideath in Bacterial Cultures	H Engelberg-Kulkka, G Glaser	53:43-70
<i>Wolbachia pipiensis</i> : Microbial Manipulator		
of Arthropod Reproduction	R Stouthamer, JAJ Breeuwer, GDD Hurst	53:71-102
Aerotaxis and Other Energy-Sensing		
Behavior in Bacteria	BL Taylor, IB Zhulin, MS Johnson	53:103-28
In Vivo Genetic Analysis of		
Bacterial Virulence	SL Chiang, JJ Mekalanos, DW Holden	53:129-54
The Induction of Apoptosis by		
Bacterial Pathogens	Y Weinrauch, A Zychlinski	53:155-87
Transmissible Spongiform Encephalopathies		
in Humans	ED Belay	53:283-314
Bacterial Biocatalysts: Molecular Biology,		
Three-Dimensional Structures, and		
Biotechnological Applications of Lipases	K-E Jaeger, BW Dijkstra, MT Reetz	53:315-51

Contributions of Genome Sequencing to Understanding the Biology of <i>Helicobacter pylori</i>	Z Ge, DE Taylor	53:353-87
Clostridial Toxins as Therapeutic Agents: Benefits of Nature's Most Toxic Proteins	EA Johnson	53:551-75
Viruses and Apoptosis	A Roulston, RC Marcellus, PE Branton	53:577-628
The Cytoskeleton of Trypanosomatid Parasites	K Gull	53:629-55
Applied Microbiology and Ecology		
Cellulose Degradation in Anaerobic Environments	SB Leschine	49:399-426
Environmental Virology: From Detection of Virus in Sewage and Water by Isolation to Identification by Molecular Biology—A Trip Over 50 Years	TG Metcalf, JL Melnick, MK Estes	49:461-87
Biodegradation of Nitroaromatic Compounds	JC Spain	49:523-55
Biocatalytic Syntheses of Aromatics from D-Glucose: Renewable Microbial Sources of Aromatic Compounds		
The Regulation of Methane Oxidation in Soil Microbial Biofilms	JW Frost, KM Draths RL Mancinelli JW Costerton, Z Lewandowski, DE Caldwell, DR Korber, HM Lappin-Scott	49:557-79 49:581-605 49:711-45
Microbiology to 10,500 Meters in the Deep Sea	AA Yayanos	49:777-805
Regulation of Pectinolysis Genes in <i>Erwinia chrysanthemi</i>	N Hugouvieux-Cotte-Pattat, G Condemeine, W Nasser, S Reverchon	50:213-57
The Role of Nucleic Acid Amplification and Detection in the Clinical Microbiology Laboratory	AC Whelen, DH Persing	50:349-73
Biosynthesis of Halogenated Metabolites by Bacteria	K-H van Pee Y Shimizu	50:375-99 50:431-65
Microalgal Metabolites: A New Perspective Genetically Engineered Synthesis of Natural Products: From Alkaloids to Corrins	CA Roessner, AI Scott CJ Whittaker, CM Klier, PE Kolenbrander	50:467-90 50:513-52
Mechanisms of Adhesion by Oral Bacteria		

Census and Consensus in Bacterial Ecosystems: The LuxR-LuxI Family of Quorum-Sensing Transcriptional Regulators

C Fuqua, SC Winans,
EP Greenberg 50:727-51

Molecular Genetics of Sulfur Assimilation in Filamentous Fungi and Yeast

GA Marzluf 51:73-96

Microbial Aldolases and Transketolases: New Biocatalytic Approaches to Simple and Complex Sugars

S Takayama,
GJ McGarvey,
C Wong 51:285-310

Sulfur Tuft and Turkey Tail: Biosynthesis and Biodegradation of Organohalogens by Basidiomycetes

E de Jong, JA Field 51:375-414

Synthesis of Enantiopure Epoxides Through Biocatalytic Approaches

R Furstoss, A Archelas 51:491-525

Genetics of Eubacterial Carotenoid Biosynthesis: A Colorful Tale

G Armstrong 51:629-59

Lantibiotics: Biosynthesis and Biological Activities of Uniquely Modified Peptides from Gram-Positive Bacteria

H-G Sahl, G Bierbaum 52:41-79

Development of Hybrid Strains for the Mineralization of Chloroaromatics by Patchwork Assembly

W Reineke 52:287-331

New Perspectives on Microbial Dehalogenation of Chlorinated Solvents: Insights from the Field

MD Lee, JM Odom,
RJ Buchanan Jr. 52:423-52

Constructing Polyketides: From Collie to Combinatorial Biosynthesis

R Bentley, JW Bennett 53:411-46

Chemotherapy and Chemotherapeutic Agents

Polyketide Synthase Gene Manipulation:

A Structure-Function Approach in CR Hutchinson, I Fujii 49:201-38

Engineering Novel Antibiotics

Discovery, Biosynthesis, and Mechanism of

Action of the Zaragozic Acids: Potent

Inhibitors of Squalene Synthase

JD Bergstrom,
C Dufresne, GF Bills,
M Nallin-Omstead,
K Byrne 49:607-39

Diversity and Systematics

Genetics, Physiology, and Evolutionary

Relationships of the Genus *Buchnera*:

Intracellular Symbionts of Aphids	P Baumann, L Baumann, C-Y Lai, D Roubakhsh, NA Moran, MA Clark	49:55-94
Poles Apart: Biodiversity and Biogeography of Sea Ice Bacteria	JT Staley, JJ Gosink	53:189-215
Genetics and Physiology		
Mechanisms for the Prevention of Damage to DNA in Spores of <i>Bacillus</i> Species	P Setlow	49:29-54
Genetics, Physiology, and Evolutionary Relationships of the Genus <i>Buchnera</i> :		
Intracellular Symbionts of Aphids	P Baumann, L Baumann, C-Y Lai, D Roubakhsh, NA Moran, MA Clark	49:55-94
The Structure and Replication of Kinetoplast DNA	TA Shapiro, PT Englund	49:117-43
Polyketide Synthase Gene Manipulation: A Structure-Function Approach in Engineering Novel Antibiotics	CR Hutchinson, I Fujii	49:201-38
Nitrogenase Structure and Function: A Biochemical-Genetic Perspective	JW Peters, K Fisher, DR Dean JR Scott, GG Churchward	49:335-66 49:367-97
Conjugative Transposition		
Leucine-Responsive Regulatory Protein: A Global Regulator of Gene Expression in <i>E. coli</i>	EB Newman, R Lin K Dybvig, LL Voelker KJ Miller, JM Wood	49:747-75 50:25-57 50:101-36
Molecular Biology of Mycoplasmas	JR Roth, JG Lawrence, TA Bobik RAJ Warren	50:137-81 50:183-212
Osmoadaptation by Rhizosphere Bacteria	IS Roberts	50:285-315
Cobalamin (Coenzyme B ₁₂): Synthesis and Biological Significance	AL Koch	50:317-48
Microbial Hydrolysis of Polysaccharides	RJ Howard, B Valent	50:491-512
The Biochemistry and Genetics of Capsular Polysaccharide Production in Bacteria	JH Miller	50:625-43
What Size Should a Bacterium Be? A Question of Scale	RL Gourse, T Gaal, MS Bartlett, JA Appleman, W Ross	50:645-77
Breaking and Entering: Host Penetration by the Fungal Rice Blast Pathogen <i>Magnaporthe grisea</i>		
Spontaneous Mutators in Bacteria: Insights into Pathways of Mutagenesis and Repair		
rRNA Transcription and Growth		
Rate-Dependent Regulation of Ribosome Synthesis in <i>Escherichia coli</i>		

Cell Biology of the Primitive Eukaryote <i>Giardia lamblia</i>	FD Gillin, DS Reiner, JM McCaffery	50:679-705
Bacterial Heavy Metal Resistance: New Surprises	S Silver, LT Phung	50:753-89
The F ₀ F ₁ -Type ATP Synthases of Bacteria: Structure and Function of the F ₀ Complex	G Deckers-Hebestreit, K Altendorf	50:791-824
Hemoglobin Metabolism in the Malaria Parasite <i>Plasmodium falciparum</i>	SE Francis, DJ Sullivan Jr, DE Goldberg	51:97-123
Getting Started: Regulating the Initiation of DNA Replication in Yeast	WM Toone, BL Aeerne, BA Morgan, LH Johnston	51:125-49
Making and Breaking Disulfide Bonds Against All Odds: The Survival Strategies of <i>Deinococcus radiodurans</i>	S Raina, D Missakas	51:179-202
Transcriptional Control of the <i>Pseudomonas</i> TOL Plasmid Catabolic Operons is Achieved Through an Interplay of Host Factors and Plasmid-Encoded Regulators	JR Battista	51:203-24
Safe Haven: The Cell Biology of Nonfusogenic Pathogen Vacuoles	JL Ramos, S Marqués, KN Timmis	51:341-73
Transcription of Protein Coding Genes in Trypanosomes by RNA Polymerase I	AP Sinai, KA Joiner	51:415-62
Clues and Consequences of DNA Bending in Transcription	L Van der Ploeg, MGS Lee	51:463-89
Regulation of Acetate Metabolism by Protein Phosphorylation in Enteric Bacteria	V de Lorenzo, J Pérez-Martín	51:593-628
Something from Almost Nothing: Carbon Dioxide Fixation in Chemoautotrophs	AJ Cozzzone	52:127-64
The Anti-Sigma Factors	JM Shively,	52:191-230
Metabolic Changes of the Malaria Parasite During the Transition from the Human to the Mosquito Host	G van Keulen, WG Meijer	
Aging in <i>Saccharomyces cerevisiae</i>	KT Hughes, K Mathee	52:231-86
Cooperative Organization of Bacterial Colonies: From Genotype to	N Lang-Unnasch, AD Murphy	52:561-90
	D Sinclair, K Mills, L Guarente	52:533-60
	DL Gutnick, E Ben-Jacob, I Cohen	52:779-806

**Surface Receptors and Transporters
of *Trypanosoma Brucei***

P Borst, AH Fairlamb
D Dubnau

52:745-78
53:217-44

**DNA Uptake in Bacteria
Integrating DNA: Transposases
and Retroviral Integrases**

L Haren, B Ton-Hoang,
M Chandler

53:245-81

Circadian Rhythms in Cyanobacteria:

Adaptiveness and Mechanism

CH Johnson, SS Golden
JL Van Etten, RH Meints

53:389-409
53:447-94

**Giant Viruses Infecting Algae
Mechanisms for Redox Control of
Gene Expression**

CE Bauer, S Elsen,
TH Bird

53:495-523

**Intercellular Signaling During Fruiting-Body
Development of *Myxococcus xanthus***

LJ Shimkets

53:525-49

Immunology

Polyketide Synthase Gene Manipulation:

**A Structure-Function Approach in
Engineering Novel Antibiotics**

CR Hutchinson, I Fujii
VW Pollard, MH Malim

49:201-38
52:491-532

Morphology, Ultrastructure, and Differentiation

**The Structure and Replication of
Kinetoplast DNA**

TA Shapiro, PT Englund

49:117-43

**The Mechanisms of *Trypanosoma cruzi*
Invasion of Mammalian Cells**

BA Burleigh,
NW Andrews

49:175-200

**Nitrogenase Structure and Function:
A Biochemical-Genetic Perspective**

JW Peters, K Fisher,
DR Dean

49:335-66

**How Bacteria Sense and Swim
Leucine-Responsive Regulatory Protein:
A Global Regulator of Gene Expression
in *E. coli***

DF Blair

49:489-522

Cell Polarity and Morphogenesis in

EB Newman, R Lin

49:747-75

Budding Yeast

K Madden, M Snyder

52:687-744

Organismic Microbiology

**Toward a Unified Evolutionary Genetics of
Microorganisms**

M Tibayrenc

50:401-29

**The β -Ketoadipate Pathway and the Biology
of Self-Identity**

CS Harwood,
RE Parales

50:553-90

Lessons from a Cooperative, Bacterial-Animal Association: The *Vibrio fischeri-Euprymna scolopes* Light Organ Symbiosis
***Xenorhabdus* and *Photorhabdus* spp.: Bugs That Kill Bugs**

Thinking about Bacterial Populations as Multicellular Organisms
Bacteria as Modular Organisms
Anaerobic Growth of a "Strict Aerobe" (*Bacillus subtilis*)
Thymine Metabolism and Thymineless Death in Prokaryotes and Eukaryotes

EG Ruby	50:591-624
S Forst, N Boemare, B Dowds, E Stackebrandt	51:47-72
JA Shapiro JH Andrews	52:81-104 52:105-26
MM Nakano, P Zuber	52:165-90
SI Ahmad, SH Kirk, A Eisenstark	52:591-625

Pathogenesis and Control

The Pathogenesis of Tuberculosis
Will the Real Agent of Cat-Scratch Disease Please Stand Up?
Intracellular Antibodies (Intrabodies) for Gene Therapy of Infectious Diseases
Interaction of Antigens and Antibodies at Mucosal Surfaces
Nosocomial Outbreaks/Pseudo-Outbreaks Due to Nontuberculous Mycobacteria

GAW Rook, R Hernandez-Pando	50:259-84
RC Jerris, RL Regnery	50:707-25
I Rondon, W Marasco	51:257-83
ME Lamm	51:311-40
RJ Wallace Jr, BA Brown, DE Griffith	52:453-90
RN Patel JI Rood	52:361-95 52:333-60

Physiology, Growth, and Nutrition

Mechanisms for the Prevention of Damage to DNA in Spores of *Bacillus* Species
Physiological Implications of Sterol Biosynthesis in Yeast
How *Salmonella* Survive Against the Odds
Nonopsonic Phagocytosis of Microorganisms
CO Dehydrogenase
The Regulation of Methane Oxidation in Soil

P Setlow	49:29-54
LW Parks, WM Casey JW Foster, MP Spector I Ofek, J Goldhar, Y Keisari, N Sharon	49:95-116 49:145-74 49:239-76
JG Ferry RL Mancinelli	49:305-33 49:581-605

Virology

Environmental Virology: From Detection of Virus in Sewage and Water by Isolation to Identification by Molecular Biology—A Trip Over 50 Years

TG Metcalf, JL Melnick,
MK Estes 49:461-87

Development and Application of Herpes Simplex Virus Vectors for Human Gene Therapy

JC Glorioso, NA DeLuca,
DJ Fink 49:675-710

Viral Vectors in Gene Therapy

AE Smith 49:807-38

Live Attenuated Varicella Vaccine

AM Arvin, AA Gershon 50:59-100

Immunopathogenesis of HIV Infection

G Pantaleo, AS Fauci 50:825-54

RNA Virus Mutations and Fitness for Survival

E Domingo, JJ Holland 51:151-78

Genetics of the Rotaviruses

RF Ramig 51:225-55

Regulators of Apoptosis on the Road

to Persistent Alphavirus Infection
DE Griffin, JM Hardwick 51:565-92

Virocrine Transformation: The Intersection

D DiMaio, C-C Lai, 52:397-421

Between Viral Transforming Proteins and

O Klein

Cellular Signal Transduction Pathways

H Kasamatsu,
A Nakanishi 52:627-86

How Do Animal DNA Viruses Get to the Nucleus?

